

Claims:

1. Atomizer for the electrostatic series coating of workpieces with an outer housing (1), which holds the spray head (4) of the atomizer and which is made of insulating material, with a line (5) for the coating material leading to the spray head along a longitudinal axis of the atomizer and running through the housing, and with an electrode arrangement (10), which is connected to a high-voltage supply device (14), which is suitable for external charging of the sprayed coating material through ionization of the air surrounding the outer housing (1), which concentrically surrounds the longitudinal axis of the atomizer, and which is embedded in a ring part (8) made from insulating material at the insulating end exposed to the outside, which is set back at an axial distance behind the spray head, characterized in that the electrode arrangement (10) is arranged in the ring part (8) made from insulating material directly at the outside of the outer housing (1).
2. Atomizer according to Claim 1, characterized in that the ring part (8, 8', 8'') is set on the outside of the outer housing (1, F) or forms a part of the wall of the outer housing.
3. Atomizer according to Claim 1 or 2, characterized in that the electrode arrangement consists of a plurality of needle-shaped electrodes (10, 105).
4. Atomizer according to Claim 3, characterized in that the electrodes (10, 105) are connected to a common annular conductor (14, 57) concentric to the longitudinal axis.

5. Atomizer according to one of the preceding claims, characterized in that at least two annular electrode arrangements (10', 105) concentric to the longitudinal axis are provided, whose ionization ends are separated from each other in the axial and/or radial direction.
6. Atomizer according to one of the preceding claims, characterized in that the ionization ends of the electrodes (104) are arranged lowered in trough-shaped recesses (42) formed in the outside of the outer housing (40).
7. Atomizer according to one of the preceding claims, characterized in that a ring concentrically surrounding the longitudinal axis of gas openings (21) opening in the axial direction is provided and these gas openings are connected to a compressed gas line of the atomizer.
8. Atomizer according to Claim 7, characterized in that the gas openings are located in the ring part containing the electrode arrangement in the vicinity of the ionization end.
9. Atomizer according to one of the preceding claims, characterized in that the ionization ends (102) of the electrodes (10) border the surface areas (82, 84) of the ring part surrounding the electrodes without a gap and are embedded in these areas.
10. Atomizer according to one of the preceding claims, characterized in that the ionization ends of the electrodes (10, 104, 105) are embedded in front surfaces

(82, 82', 82'', 84) of the outer housing or ring part running perpendicular to the longitudinal axis of the atomizer.

11. Atomizer according to one of the preceding claims, characterized in that the outer housing (30) forms a shield (31) extending in the axial direction over at least one part of the spray head (34).

12. Atomizer according to one of the preceding claims, characterized in that the outer housing (1, 1') and/or the ring part (8) containing the electrode arrangement consist of PTFE.

13. Atomizer according to one of the preceding claims, characterized in that at least one high-voltage generator forming the high-voltage supply device is arranged in the atomizer.

14. Atomizer according to one of the preceding claims, characterized in that for each electrode or for individual electrode groups, a separate high-voltage generator is provided.